PATTON Electronics Co.

SmartNode 4940 Series

Multi-Port T1/E1/PRI Enterprise VoIP Media Gateway

Quick Start Guide

Part Number: **07MSN4940-QS, Rev. A**
Revised: **June 13, 2011**

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WARNING

- **Do not open the device when the power cord is connected. For systems without a power switch and without an external power adapter, line voltages are present within the device when the power cord is connected.**
- **For devices with an external power adapter, the power adapter shall be a listed *Limited Power Source* The mains outlet that is utilized to power the device shall be within 10 feet (3 meters) of the device, shall be easily accessible, and protected by a circuit breaker in compliance with local regulatory requirements.**
- **For AC powered devices, ensure that the power cable used meets all applicable standards for the country in which it is to be installed.**
- **For AC powered devices which have 3 conductor power plugs (L1, L2 & GND or Hot, Neutral & Safety/Protective Ground), the wall outlet (or socket) must have an earth ground.**
- **For DC powered devices, ensure that the interconnecting cables are rated for proper voltage, current, anticipated temperature, flammability, and mechanical serviceability.**
- **WAN, LAN & PSTN ports (connections) may have hazardous voltages present regardless of whether the device is powered ON or OFF. PSTN relates to interfaces such as telephone lines, FXS, FXO, DSL, xDSL, T1, E1, ISDN, Voice, etc. These are known as "hazardous network voltages" and to avoid electric shock use caution when working near these ports. When disconnecting cables for these ports, detach the far end connection first.**

- **Do not work on the device or connect or disconnect cables during periods of lightning activity.**

In accordance with the requirements of council directive 2002/96/EC on Waste of Electrical and Electronic Equipment (WEEE), ensure that at end-of-life you separate this product from other waste and scrap and deliver to the WEEE collection system in your country for recycling.

WARNING

This device contains no user serviceable parts. This device can only be repaired by qualified service personnel.

CAUTION

Electrostatic Discharge (ESD) can damage equipment and impair electrical circuitry. It occurs when electronic printed circuit cards are improperly handled and can result in complete or intermittent failures. Do the following to prevent ESD:

- **Always follow ESD prevention procedures when removing and replacing cards.**
- **Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact. Connect the clip to an unpainted surface of the chassis frame to safely channel unwanted ESD voltages to ground.**
- **To properly guard against ESD damage and shocks, the wrist strap and cord must operate effectively. If no wrist strap is available, ground yourself by touching the metal part of the chassis.**

1.0 Power up the SmartNode

1. Insert the barrel type connector end of the AC power cord into the external power supply connector.
2. Insert the female end of the power cord into the internal power supply connector.
3. Verify that the AC power cord included with your router is compatible with local standards. If it is not, contact Patton to replace it with a compatible power cord.
4. Connect the male end of the power cord to an appropriate power outlet.
5. Wait until the *Power* LED stops blinking and remains constantly lit. Now the SmartNode is ready to configure.

2.0 Configuring the desired IP address

2.1 Factory-default IP settings

The factory default configuration for the Ethernet interface IP addresses and netmasks are listed in **table 1**. The Ethernet 0/0 port uses DHCP client to get the IP address and netmask automatically from the service provider.

Table 1. Factory default IP address and network mask configuration

Item	IP Addresss	Network Mask
Ethernet 0 (ETH 0/0)	DHCP	DHCP

3.0 Connecting the SmartNode to the network

CAUTION

The interconnecting cables shall be acceptable for external use and shall be rated for the proper application with respect to voltage, current, anticipated temperature, flammability, and mechanical serviceability.

The SmartNode 4940 Series provides an auto-MDX feature for the Ethernet port, so you can use a straight-through or cross-over cable to connect to a host or a switch (see **figure 1**).

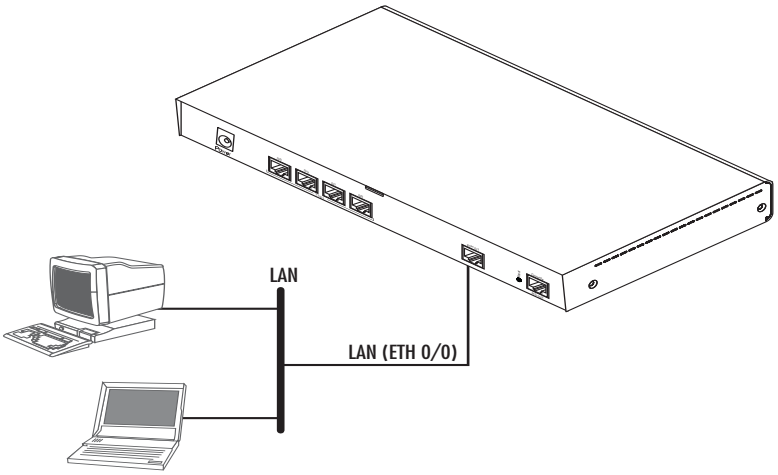

Figure 1. Connecting the SmartNode to the network

You can check the connection with the ping command from the SmartNode to another host on the local LAN.

```
172.16.1.99(if-ip)[LAN]#ping <IP Address of the host>
```

4.0 Loading the configuration (optional)

Patton provides a collection of configuration templates on the CD-ROM shipped with your SmartNode device—and also on the support page at **www.patton.com/voip**—one of which may be similar enough to your application that you can use it to speed up configuring the SmartNode. Simply download the configuration note that matches your application to your PC. Adapt the configuration as described in the configuration note to your network (remember to modify the IP address) and copy the modified configuration to a TFTP server. The SmartNode can now load its configuration from this server.

Note Patton regularly adds new configuration templates to the collection at **www.patton.com/voip**, so if you do not see your application on the CD-ROM, it may have been added to the website.

Note If your application is unique and not covered by any of Patton's configuration templates, you can manually configure the SmartNode instead of loading a configuration file template. In that case, refer to the *SmartNode Series SmartWare Software Configuration Guide* for information on configuring the SmartNode device.

In this example we assume an TFTP server resides on the host with the IP address 172.16.1.11 and the configuration file named *SN.cfg* resides in the root directory of the TFTP server.

```
172.16.1.99(if-ip)[WAN]#copy tftp://172.16.1.11/SN.cfg startup-
   config
Download...100%
172.16.1.99(if-ip)[WAN]#
```

After you reboot the SmartNode the new startup configuration will become active.

IMPORTANT

When you issue the reload command, the SmartNode will ask if you want to copy the running configuration to the startup configuration. Since you just downloaded a configuration file to the startup configuration you must answer this question with ***NO***. Otherwise, the downloaded configuration will be overwritten and lost!

```
172.16.1.99(if-ip)[WAN]#reload
Running configuration has been changed.
Do you want to copy the 'running-config' to the 'startup-config'?
Press 'yes' to store, 'no' to drop changes : no
Press 'yes' to restart, 'no' to cancel : yes
The system is going down
```

5.0 Additional Information

Refer to the *SmartNode Series SmartWare Software Configuration Guide* and the *SmartNode Getting Started Guide* located on the CD-ROM shipped with your SmartNode device and available online at **www.patton.com/manuals.** For detailed information about:

- Installing, configuring, operating, and troubleshooting.
- Warranty, trademark & compliance

The CD-ROM also includes many freeware and shareware tools, including TFTP servers, and Telnet clients.

A.0 Customer and Technical Support

Toll-Free VoIP support: call **sip:support@patton.com** with a VoIP SIP client

Online support: www.**patton.com**

E-mail support: **support@patton.com**—answered within 1 business day

Telephone support:

- Standard: +1 (301) 975-1007 (USA), Monday–Friday: 8:00 am to 5:00 pm EST (1300 to 2200 UTC/GMT)
- Alternate: +41 (0)31 985 25 55 (Switzerland), Monday–Friday: 8:00 am to 5:00 pm CET (0900 to 1800 UTC/GMT)

Fax: **+1 (253) 663-5693** (USA) **or +41 (0)31 985 25 26** (Switzerland)

B.0 Compliance Information

B.1 Compliance

EMC Compliance:

- FCC Part 15, Class A
- EN55022, Class A
- EN55024

Safety Compliance:

- UL60950-1/CSA C22.2 No. 60950-1
- IEC/EN 60950-1
- AS/NZS 60950-1

PSTN Regulatory Compliance:

- FCC Part 68
- CS-03
- AS/ACIF S016
- AS/ACIF S038
- AS/ACIF S043 (G.SHDSL card)
- NZ ISDN Layer 3 Supplement

B.2 Radio and TV interference

The SmartNode router generates and uses radio frequency energy, and if not installed and used properly—that is, in strict accordance with the manufacturer's instructions—may cause interference to radio and television reception. The SmartNode router have been tested and found to comply with the limits for a Class A computing device in accordance with specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection from such interference in a commercial installation. However, there is no guarantee that interference will not occur in a particular installation. If the SmartNode router does cause interference to radio or television reception, which can be determined by disconnecting the unit, the user is encouraged to try to correct the interference by one or more of the following measures: moving the computing equipment away from the receiver, re-orienting the receiving antenna and/or plugging the receiving equipment into a different AC outlet (such that the computing equipment and receiver are on different branches).

B.3 FCC Part 68 (ACTA) Statement

This equipment complies with Part 68 of FCC rules and the requirements adopted by ACTA. On the bottom side of this equipment is a label that contains—among other information—a product identifier in the format US: AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

The method used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment, for repair or warranty information, please contact our company. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

B.4 Industry Canada Notice

This equipment meets the applicable Industry Canada Terminal Equipment Technical Specifications. This is confirmed by the registration number. The abbreviation, IC, before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment.

This Declaration of Conformity means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction. Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above condition may not prevent degradation of service in some situations. Repairs to some certified equipment should be made by an authorized maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment. Users should ensure for their own protection that the ground connections of the power utility, telephone lines and internal metallic water pipe system, are connected together. This protection may be particularly important in rural areas.

B.5 EC Declaration of Conformity

(See section **B.6 "EG-Konformitätserklärung"** for German version.)

Product Description: SmartNode 4940 Series

This equipment conforms to the requirements of Council Directive 1999/5/EC on the approximation of the laws of the member states relating to Radio and Telecommunication Terminal Equipment and the mutual recognition of their conformity.

The safety advice in the documentation accompanying the products shall be obeyed. The conformity to the above directive is indicated by the CE sign on the device.

The signed Declaration of Conformity can be downloaded from **www.patton.com/certifications/.**

B.6 EG-Konformitätserklärung

(see section **B.5 "EC Declaration of Conformity"** for English version)

Produktbezeichnung: SmartNode 4940 Baureihe

Die bezeichneten Produkte stimmen in der von uns in Verkehr gebrachten Ausführung mit den Vorschriften folgender Richtlinie überein:

R&TTE 1999/5/EG

Richtlinie des europäischen Parlaments und des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über Funkanlagen und Telekommunikations-Endeinrichtungen und die gegenseitige Anerkennung ihrer Konformität.

Die Sicherheitshinweise in der mitgelieferten Produktdokumentation sind zu beachten. Die Konformität mit der oben erwähnten Richtlinie wird durch das CE-Zeichen auf dem Gerät bestätigt.

Die unterzeichnete Konformitätserklärung kann heruntergeladen werden von: **www.patton.com/certifications/.**

Copyright statement

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Trademarks statement

The term *SmartNode* is a trademark of Patton Electronics Company. All other trademarks presented in this document are the property of their respective owners.

Warranty, Trademark, & Compliance Information

For warranty, trademark and compliance information, refer to the *Models SN4940 Series Getting Started Guide* located on the CD-ROM that came with your VoIP Gateway Router or available online at **www.patton.com**.

Notes